

W302P is an advanced wireless PCI adapter which has a 2.4G work frequency and 15 dBm radiated power. It has one radiated channel while two received channels. The 1 × 2 configuration is implemented with only one outside chain (Chain 0). 11b/g mode, only examines Chain 0, because only Chain 0 is functional according to the user driver of Ralink. The power is transmitted from TX0 only at 11b/g normal mode in Ralink solution. The RF chipset is manufactured by Ralink Technology, Corp. The antenna peak gain 1.8 dBi (highest gain) were chosen for full testing.

The RT2760 is a highly integrated MAC/baseband processor to support IEEE 802.11b/g/n wireless LAN Standards. The processor is part of Ralink chip set RT2720 for the baseband part, it supports the Direct Sequence Spread Spectrum (DSSS) for 2.4GHz band and Orthogonal Frequency Division Multiplexing (OFDM) for 2.4GHz. Using advanced digital signal processing technologies, the optimal reception performance under severe multi-path environments is achieved.

RT2720 is a monolithic SiGe half-duplex direct-conversion radio transceiver designed for IEEE802.11a/b/g WLAN systems or other wireless system applications operating in 2.4-2.48 GHz (low-band) bands.

First, the signal from computer comes into the RT2760, which modulates it by OFDM or DSSS. Then the RT2760 transmits it to the RT2720, which deals with it further and transmits it. The signal from the RT2760 is filtered by BPF and is amplified by PA. Finally, it goes into the external space by the antenna which belongs to a category called 1.8dBi antenna.

Type of Modulation	IEEE 802.11b : DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g : OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20/40 : OFDM (64QAM, 16QAM, QPSK, BPSK)
Frequency range	IEEE 802.11b/g, 802.11n HT20: 2412-2462MHz IEEE 802.11n HT40 : 2422MHz-2452MHz
Channel Spacing	IEEE 802.11b/g ,802.11n HT20/HT40 : 5MHz
Air Data Rate	IEEE 802.11b : 11, 5.5, 2, 1 Mbps IEEE 802.11g : 54, 48, 36, 24, 18, 12, 9, 6 Mbps IEEE 802.11n HT20 : 130, 117, 104, 78, 65, 58.5, 52, 39, 26, 19.5, 13, 6 Mbps IEEE 802.11n HT40 : 130, 117, 104, 78, 65, 58.5, 52, 39, 26, 19.5, 13, 6 Mbps
Frequency Selection	By software
Channel Number	IEEE 802.11b/g ,802.11n HT20 : 11 Channels IEEE 802.11n HT40 : 7 Channels